Clarke®

100L BELT DRIVEN AIR COMPRESSOR

MODEL NO: RACER 9/100P (3PH)

PART NO: 2245025

OPERATION & MAINTENANCE INSTRUCTIONS

CE

LS1013

INTRODUCTION

Thank you for purchasing this CLARKE 100L Belt Driven Air Compressor.

Read this manual fully before use and follow the instructions carefully. In doing so you will ensure the safety of yourself and those around you, and you can look forward to your purchase giving you long and satisfactory service.

Due to our policy of continual product improvement, the images in this manual may not match the product exactly.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

PARTS AND SERVICING

For Parts & Servicing, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400
PARTS & SERVICE FAX: 020 8558 3622
or e-mail as follows:
PARTS: Parts@clarkeinternational.com
SERVICE: Service@clarkeinternational.com

SAFETY PRECAUTIONS

Before using your compressor it is in your own interest to read and pay attention to the following safety rules.

1. Compressed air is dangerous. Do not point a jet of air at persons or animals, and do not discharge compressed air against the skin.
2. DO NOT operate your compressor with the guard removed.
3. Repairs must only be carried out by a qualified engineer. If problems occur, contact your Clarke dealer.
4. Before carrying out any maintenance, make sure that the pressure is released from the air reservoir, and that the compressor is disconnected from the electrical supply.
5. DO NOT leave pressure in the receiver overnight, or when transporting.
6. DO NOT adjust, or tamper with the safety valves. The maximum pressure is factory set, and clearly marked on the compressor.
7. DO NOT operate in wet or damp conditions. Keep the compressor dry at all times. Similarly, clean air will allow the compressor to work efficiently. Do not use in dusty or otherwise dirty locations.
8. Some of the metal parts can become quite hot during operation. Do not to touch these until the compressor has cooled down.
9. Always set the pressure regulator to the recommended setting for the tool.
10. When spraying flammable materials e.g. cellulose paint, ensure that there is sufficient airflow and keep clear of any source of ignition.
11. Before spraying any material always consult paint manufacturers instructions for safety and usage.
12. Protect yourself. Goggles will protect your eyes from flying particles. Face masks will protect you against paint spray and fumes.
13. Do not apply strain to electrical cables and make sure that air hoses are not kinked or wrapped around the compressor.
14. When disconnecting air hoses or other equipment from your compressor, make sure that the air supply is turned off at the outlet and vent all pressurised air from within the reservoir and other equipment attached to it.
15. Make sure that children and animals are kept well away from the compressor and any equipment attached to it.
16. Make sure that all individuals using the compressor have had the necessary training and have read and fully understand these operating instructions.
17. Make sure that any equipment or tool used in conjunction with your compressor, has a safe working pressure exceeding that of the compressor.
18. Be careful when transporting the compressor to prevent tipping over
19. Permanently installed systems must be installed by a competent engineer.
20. These compressors produce noise levels in excess of 70dB(A). Persons working near the compressor must be supplied with ear protection.

SAFETY SYMBOLS

	Read this instruction booklet carefully before positioning, operating or adjusting the compressor.
	Risk of electric shock. The compressor must be disconnected from the mains supply before removing any covers. Do not use in a damp environment.
	Risk of accidental start-up. The compressor could start automatically in the event of a power cut and subsequent reset. Do not mover the compressor while it is connected to the power source, or when the tank is filled with compressed air.
	This compressor contains surfaces which may reach a high temperature during operation. Never operate with the motor housing removed.
	Wear safety goggles and ear protectors when using this compressor.
	This compressor produces a high sound level during operation. Ear protection should be worn.

ELECTRICAL CONNECTIONS

WARNING: READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.

The power cable from the main supply must be large enough to carry the starting and running load of the electric motor. This is particularly relevant if the compressor is some distance from the source of supply.

Electrical installations should be completed by a qualified electrician.

Electrical connection to the mains supply must be via a suitably fused (see table below) approved plug or isolator (allowing sufficient capacity for motor starting). If using a circuit breaker, ensure it is motor rated and of sufficient size to allow for motor starting.

Compressors should be connected to mains electricity supply via an earth leakage protection device (RCD).

SUGGESTED FUSE RATINGS

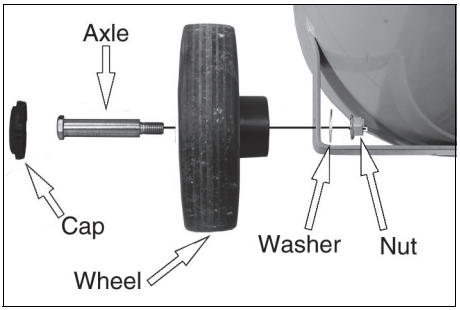
MOTOR SIZE		SINGLE PHASE MOTOR D.O.L.	THREE PHASE MOTORS 415V	
KW	HP		D.O.L.	STAR DELTA
0.75	1.0	13 amp	10 amp	
1.1	1.5	13/15 amp	10 amp	
1.5	2.0	20 amp	10 amp	
1.9	2.5	20 amp		
2.2	3.0	30 amp	16 amp	
3.0	4.0	40 amp	20 amp	
4.0	5.5	50 amp	25 amp	
5.5	7.5		30 amp	
7.5	10.0			25 amp
11.0	15.0			30 amp
15.0	20.0			35 amp

ASSEMBLY

CAUTION: TO PREVENT INJURY, GET ASSISTANCE WHEN LIFTING THIS COMPRESSOR.

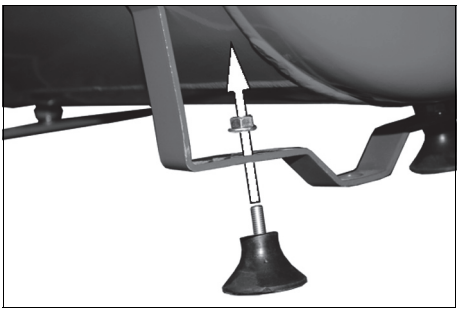
ATTACH THE WHEELS

1. Slide the axle through the wheel and hole in the wheel frame.
2. Lock the wheel in place using the washer and nut provided.
3. Fit the cap into the position shown.



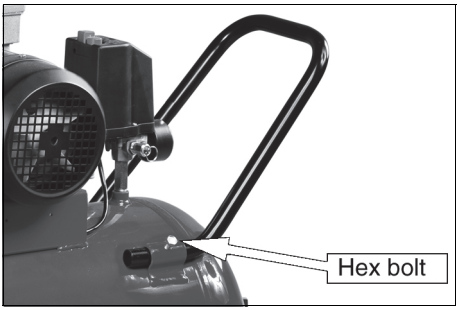
ATTACH THE SUPPORT FEET

Insert the support feet into the position shown.



FIT THE HANDLE

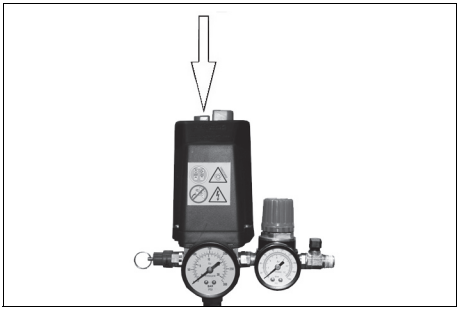
4. Loosen the hex bolts and insert the handle into the brackets as shown.
5. Tighten the hex bolts.



BEFORE USE

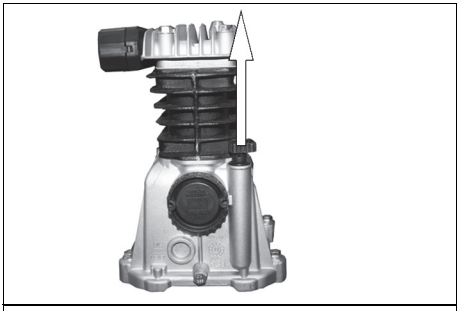
Before connecting your compressor to the power supply, check the following:-

- Set the ON/OFF switch to the OFF position (pushed down).
- Make sure that the compressor is on level ground.
- Make sure that the supply voltage matches the voltage shown on the data label.

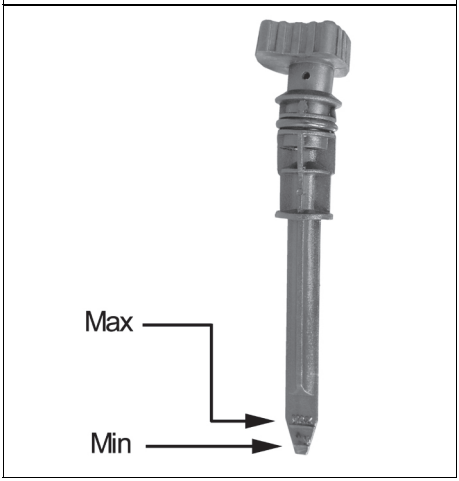


CHECK THE OIL LEVEL

1. Remove the dipstick from the oil reservoir.



2. Ensure the oil level is between the min and max marks on the dipstick.
   - Only use SAE30 compressor oil, available from your Clarke Dealer Part No. 3050801 taking care not to exceed the maximum mark.



OPERATION

If the compressor has not been used for more then 24 hours, open the drain valve (on the bottom of the reservoir) and drain any condensate which has collected. See page 11

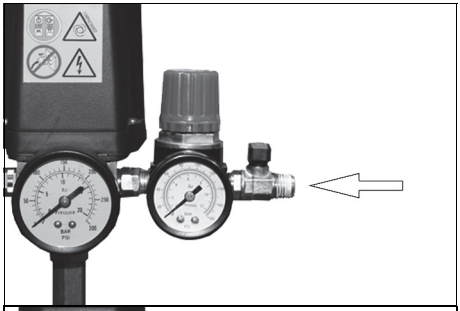
MOVING THE AIR COMPRESSOR

- Stop the compressor and disconnect it from the power supply before you move it.
- Always use the handle.
- Do not lift by (or put strain on) valves or hoses.

ATTACHING AIR TOOLS

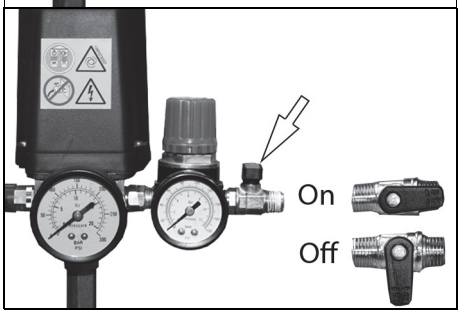
WARNING: BEFORE CONNECTING AIR TOOLS, MAKE SURE THAT YOU READ THE INSTRUCTIONS SUPPLIED WITH THE TOOL, ALSO ENSURE THAT THE TOOL IS SUITABLE FOR USE WITH THE COMPRESSOR AND HOSE SPECIFICATIONS.

1. Attach the air hose to the outlet valve.
2. Attach the air tool to the other end of the air hose.



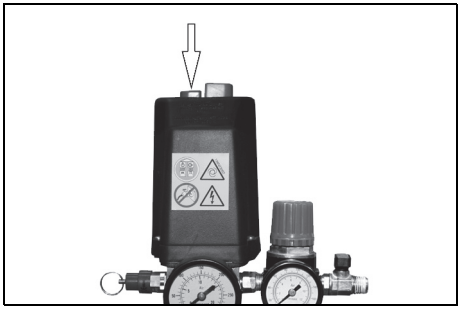
3. Turn the outlet valve handle to the on position.

NOTE: The outlet valve is shown without the air hose fitted for clarity.



TURNING THE COMPRESSOR ON

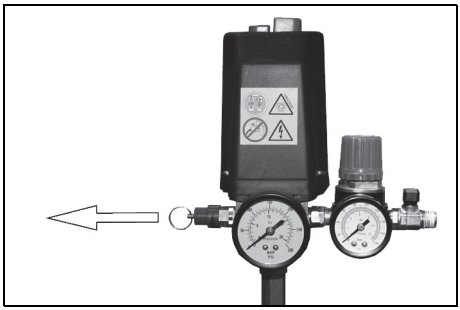
1. Plug the compressor into the power supply.
2. Lift the On/Off button.
   - The compressor will operate until the reservoir is fully pressurised. It will then shut down.
   - The compressor will start up again when the pressure in the reservoir decreases.



CHECK THE SAFETY VALVE

To make sure that the safety valve works correctly.

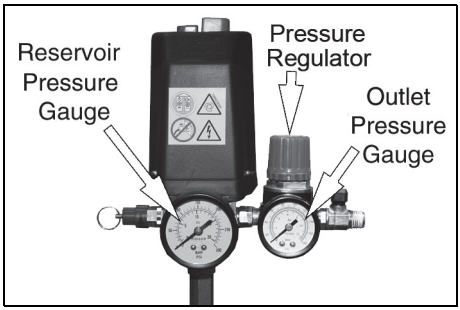
1. Pull on the ring attached.
   - Air will be released when you pull on the ring and stop when released.
2. If the valve does not operate in this way, do not use the compressor. The compressor must be repaired by a qualified service agent.



WARNING: DO NOT REMOVE OR TRY TO ADJUST THE SAFETY VALVE.

SET THE OUTLET PRESSURE

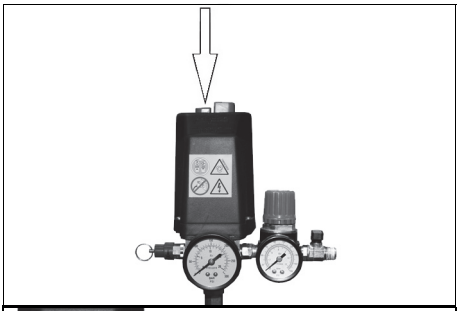
1. Use the pressure regulator to set the outlet pressure.
   - Turn clockwise to increase the pressure.
   - Turn counterclockwise to decrease the pressure.



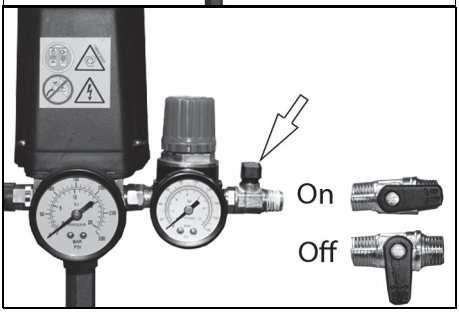
REMOVING TOOLS FROM THE AIR HOSE

WARNING: ALWAYS SET THE PRESSURE REGULATOR TO ZERO BEFORE YOU REMOVE OR REPLACE A TOOL.

1. Push down on the On/Off button to stop the compressor.



2. Turn the outlet valve handle to the off position.
3. Operate the tool to depressurise the air hose.
4. Disconnect the tool from the hose.



TURNING THE COMPRESSOR OFF

1. Follow steps 1-3 in "Removing Tools From The Air Hose" above.
2. Disconnect the compressor from the power supply.
3. Slowly open the outlet valve to depressurise the reservoir.
   - You will hear a hissing sound as the reservoir depressurises.
4. Do not leave the compressor unattended if the reservoir is pressurised.

DRAINING THE RESERVOIR

CAUTION: YOU MUST DRAIN THE RESERVOIR AFTER EACH DAYS USE AND BEFORE YOU PUT YOUR COMPRESSOR INTO STORAGE.

1. Turn the compressor off and disconnect from the power supply.
2. Put a container below the drain valve to collect the condensate.
   - The drain valve is located on the bottom of the reservoir
3. Open the drain valve slowly.
   - Condensation will drain from the reservoir.
4. Close the drain valve when the reservoir has fully drained.

MAINTENANCE

DRAIN THE RESERVOIR (DAILY)

After use, always open the drain valve to make sure that any condensate is drained off.

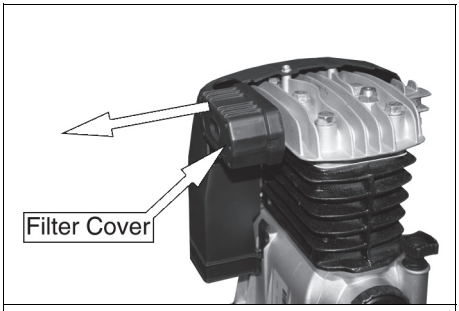
CHECK OIL (DAILY)

Ensure the oil level is between the min and max marks on the dipstick. See "Check the Oil level" on page 7 and top-up if necessary - (use Clarke SAE 30 compressor oil, available from your local dealer).

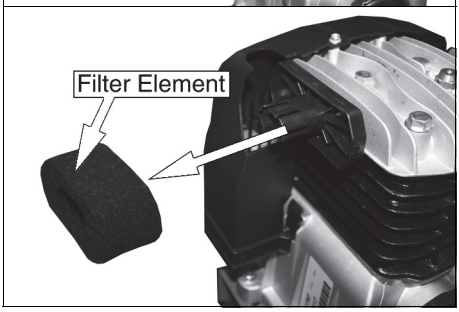
CLEAN THE AIR FILTER (MONTHLY)

The air filter must be examined monthly, more often in dusty conditions,

1. Pull the filter cover away from the compressor



2. Pull out the filter element.
3. Clean the filter using a soft brush.
   - If necessary, the filter can be carefully cleaned in warm soapy water.
   - Rinse and let the filter dry completely before refitting.
   - If the filter or filter element is damaged, you must replace it.



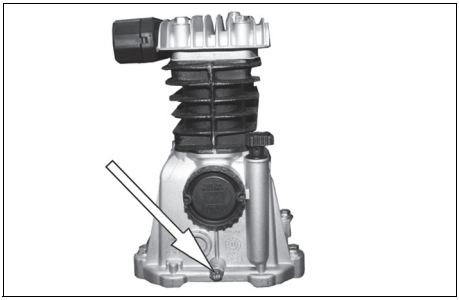
4. Reassembly the filter and replace it onto the compressor using the securing bolt.

Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

REPLACING THE OIL

After the first 100 hours use, replace the oil using Clarke SAE30 compressor oil. Then replace the oil after every 500 hours of operation or every 6 months.

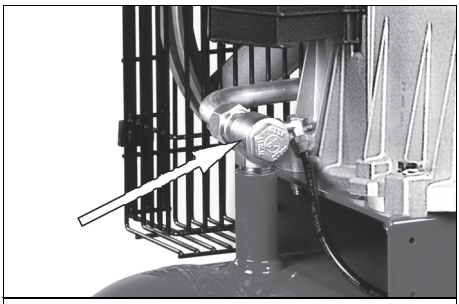
To empty the oil from the machine, remove the oil drain plug from the crankcase cover.



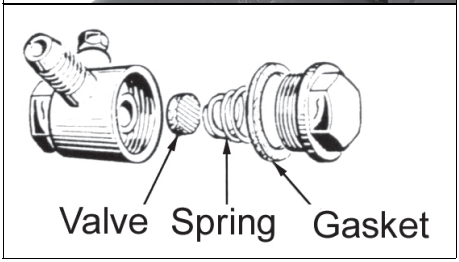
CHECK THE NON-RETURN VALVE (EVERY 6 MONTHS)

If the reservoir pressure decreases for no apparent reason, it is possible that the non-return valve is leaking. To check,

1. Make sure that the reservoir is not under pressure and the compressor is switched OFF.

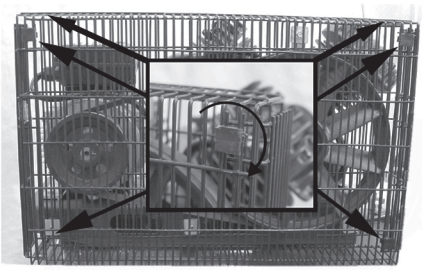


2. Examine the non-return valve, and replace the gasket and valve if necessary.

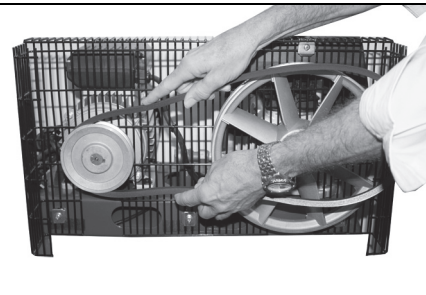


REPLACING THE DRIVE BELT

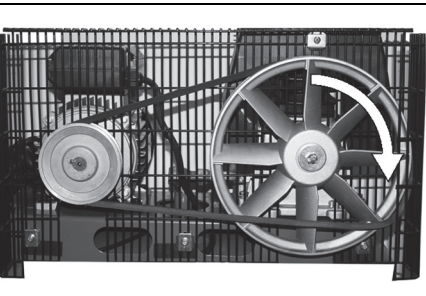
1. Rotate the clips shown 90 degrees.
2. Remove the front of the cage and take out the worn or broken drive belt.



3. Place the new drive belt over the small pully.



4. Position part of the drive belt over the large belt pulley as shown.
5. Rotate the large pulley by hand in a clockwise direction whilst guiding the belt on to the large pulley.



SPECIFICATIONS

MODEL RACER 9/100P (3PH)	
Part Number	2245025
Max Pressure	10 Bar
Voltage	400 VAC (50/60Hz)
Air Displacement	9 CFM
Receiver Capacity	100 L
Dimensions (L x W x H)	1070 x 450 x 770 mm
Guaranteed Sound Power Level	94 dB(A)
Weight	61.5 kg

Please note that the details and specifications contained herein, are correct at the time of going to print. We reserve the right to change specifications at any time without prior notice.

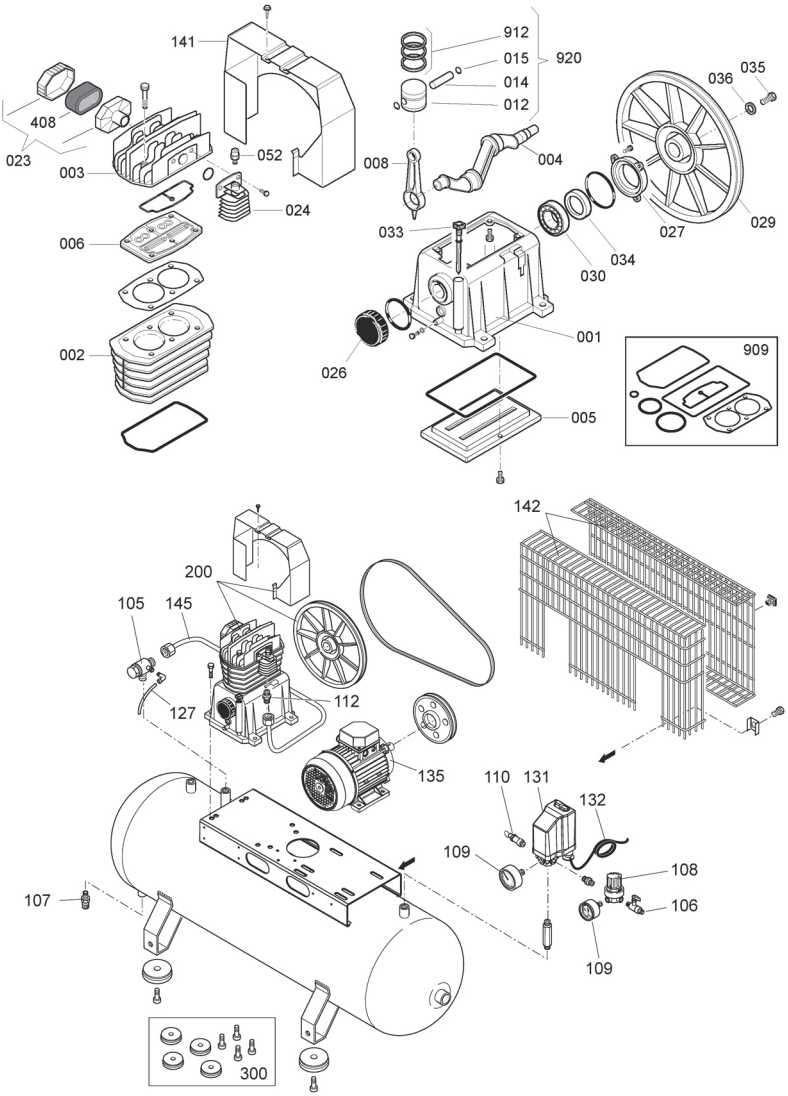
TROUBLESHOOTING

CAUTION: DO NOT TRY TO REPAIR OR ADJUST THIS COMPRESSOR IF YOU ARE UNCERTAIN. IF YOU HAVE ANY QUERIES, CONTACT YOUR DEALER.

PROBLEM	PROBABLE CAUSE	REMEDY
The compressor has stopped and does not start.	Bad electrical connections.	1. Check electrical connections. 2. Clean and tighten if necessary.
	Overload cutout switch has tripped.	1. Switch off and wait approx 5 minutes. 2. Press the reset button and switch on again.
	Motor windings burnt out.	1. Contact your Clarke dealer for a replacement motor.
The compressor does not reach the set pressure and overheats easily.	Compressor head gasket blown or valve broken.	1. Return the machine to your nearest service agent.
Compressor does not start.	The reservoir has already fully pressurised.	1. Open drain valve to expel air. Compressor should start again when pressure reduces.
Air leaking from the non-return valve when the compressor is not running.	Faulty non-return valve.	1. Drain receiver completely of air. 2. Remove the valve end plug, 3. Carefully clean the valve seat and the gasket 4. Reassemble.
Air pressure from the regulator will not adjust.	The diaphragm within the regulator body is broken.	1. Replace regulator
The compressor is very noisy and makes a metallic knocking sound.	Compressor damaged and needs overhaul.	1. Return the machine to your nearest service agent.

Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

EXPLODED DIAGRAM



PARTS LIST

NO	DESCRIPTION	PART NO
1	CRANKCASE	FN4105267
2	CYLINDER	FN4105275
3	HEAD	FN4105259
4	CRANKSHAFT	FN4105269
5	LOWER COVER	FN4105257
6	KIT VALVE HOLDER	FN4105292
8	CONROD	FN4105262
23	KIT INT.FILTER	FN4105291
24	AFTERCOOLER	FN4105230
26	END COVER	FN4105254
27	FRONT SUPPORT	FN4105253
29	FLYWHEEL	FN4105228
30	BEARING	FN9170116
33	DIPSTICK ASSEMBLY	FN4105289
34	GASKET	FN9163010
35	SCREW	FN4105231
36	WASHER	FN4105234
52	COLD START VALVE	FN4101047
141	SHROUD	FN4105261
909	GASKET KIT	FN4105851
912	PISTON RING KIT	FN4105287
920	PISTON KIT	FN416025017
104	HANDLE	FN9083711
105	NON RETURN VALVE	FN9048052
106	TAP BALL VALVE	FN9047077
107	DRAIN VALVE	FN9053063
108	PRESSURE REDUCER	FN9414364
109	GAUGE 50	FN9052056
110	SAFETYVALVE	FN4101065
127	RILSAN PIPE	FN9270006
131	PRESS SWITCH + STARTER	FN9063147
132	CORD	FN9065811

NO	DESCRIPTION	PART NO
135	MOTOR	FN845S000
142	BELT GUARD	FN4101125
145	SEND PIPE	FN4101150
200	PUMP	FN41P0017SGL
300	KIT FEET	FN41K0174

DECLARATION OF CONFORMITY

CE

Clarke® INTERNATIONAL

Hemnall Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We, Clarke International, as the authorised representative of the manufacturer, declare that the following product(s) comply with the directive(s) and standard(s) listed below.

Product Description:	Air compressor
Model number(s):	Racer 9/100P
Serial / batch Number:	N/A
Notified Body:	N/A.....
	.....
	.....
	.....
	.....
Technical Documentation Holder:	A.R. Pond
	Clarke International
	2a Shrubland Road
	London E10 7RB
	UK
Conformity Assessment Procedure:	to 2000/14/EC Annex VI
Manufacturer:	European Supplier
Noise Related Value:	1.5 kW
Measured Sound Power Level:	91.5 dB
Guaranteed Sound Power Level:	94 dB

DECLARATION OF CONFORMITY

CE

Clarke® INTERNATIONAL

Hemnall Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

Directive(s):

2004/108/EC	*Electromagnetic Compatibility Directive.*
2006/42/EC	*Machinery Directive.*
2009/105/EC	*Simple Pressure Vessel Directive.*
2000/14/EC	*Noise Emissions Directive, (amended by 2005/88/EC).*
2002/95/EC	*Restriction of Hazardous substances.*

Standard (s):

EN 61000-6-2:2006, EN 60204-1:2006 +A1:2009, EN 1012-1:2010, EN60335-1, EN 61000-6-3/4

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2011

Signed:

J.A. Clarke
Director

Date of Issue: 04/02/2013

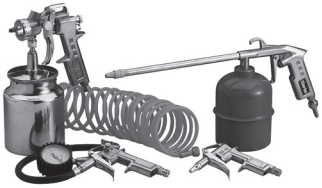
Place of issue:

Clarke International
Hemnall Street
Epping
Essex, CM16 4LG
England

POPULAR ACCESSORIES

Your local Clarke stockists can supply a wide choice of accessories to help you make the very best of your air compressor. These include:

KIT1000



5 Piece Air Accessory Kit – KIT100
Kit comprises:
- Paint spray gun • Recoil hose • Paraffin gun
- Tyre inflator with gauge • Blow gun • All connections 1/4" BSP
- Weight 2kg

CAT116
3/8" Air Drill

CAT118
Sabre Saw

CAT121
Dual Action Sander

CAT108
1/2" Square Drive Reversible Ratchet

CAT109
3/8" Square Drive Reversible Ratchet

CAT115
1/2" Reversible Ratchet

CAT110
1/2" Square Drive Impact Wrench

CAT117
1/2" Impact Wrench

CAT111
Orbital Sander

CAT113
3" CUT-OFF TOOL

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PRO12
This professional spraygun is available with a choice of nozzle sizes to suit air compressors from 1.5HP – 3HP.

TG2
Touch up gun ideal for precision paint spraying and touch up work. This syphon fed, external mix spraygun is popular with professionals.

Air hose is available in a range of lengths. Amongst the most popular are:

BLACK RUBBER AIR HOSE
Complete with connections, this hose is available in lengths from 10m to 50m

RECOIL HOSE
Ideal for DIY and professional use, this recoil house is available in a range of lengths

NOTES

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